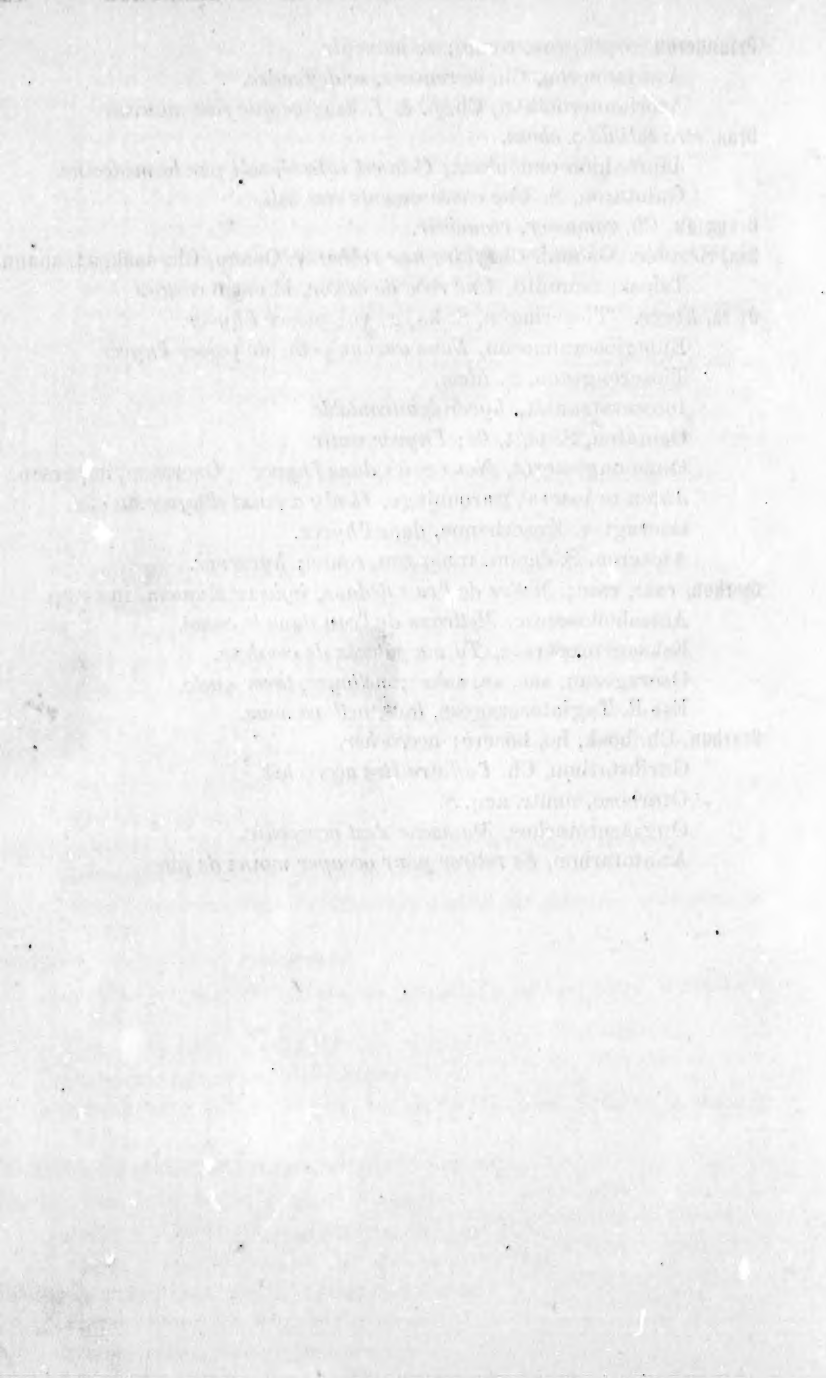




On some DOUBTFUL or INTERMEDIATE ARTICULATIONS:

An EXPERIMENT in PHONETICS.

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IN many languages, as is well known, there are elementary sounds of an indeterminate character, which seem to float between two, and sometimes even three or four, diverse articulations. The American and the Polynesian languages afford many instances of this sort, which have much perplexed those who have attempted to reduce them to writing. A striking example is found in the Hidatsa (or Minnetaree) speech, a language of the Dakota stock, of which we have an excellent account by Dr. Washington Matthews. In this language, he informs us, "there are two series of interchangeable consonants—a labial series, consisting of *m*, *b*, and *w*, and a dental, or linguo-dental series, consisting of *d*, *l*, *n*, and *r*." Dr. Matthews regards the *m* as the "standard letter" of the labial series, and the *d* as the "standard letter" of the dental series, and the other letters in each series as mere variants of these. That is, the word *mia*, mother, may be frequently heard with the pronunciations *wia* and *bia*; and the word *dopa*, two, may be heard as *nopa*, *lopa*, and *ropa*.

In the Samoan and Hawaiian languages of Polynesia, spoken in the Navigator group and the Sandwich Islands, the linguo-dental series has almost as wide a range of variation. The *l* and the *r* are constantly interchanged, and frequently pass into the *d* sound. *Hilo*, the name of a district in Hawaii, has in past times, before the orthography was settled by the missionaries, been spelt *Hiro* and *Hido*. *Fale-alili*, the name of a place in the Navigator Islands, has in like manner been written *Fale-aridi*. In the Canienga (or Mohawk) language the sounds of *l* and *r*, of *g* (hard) and *k*, of *o* and *u*, are constantly interchanged. The word for man (or, rather, "he is a man") may be indifferently written *rongwe*, *rungwe*, *longwe*, *lungwe*, *ronkwe*, *runkwe*, *lonkwe*, or *lunkwe*.

In the Hawaiian a remarkable interchange occurs between the sounds of *t* and *k*. *Teiti* and *keiki* for child, *tanata* and *kanaka* for man, are heard, and were formerly written indifferently. The element is really the Polynesian *t*, as is shown by comparison with other languages of that stock. The Hawaiian, so far as is known, is the only language of this family in which this singular interchange of *t* and *k* occurs. The missionaries, it is said, were perplexed in attempting to determine whether to use the *t* and *r*, or the *k* and *l*, in the alphabet of this speech.

They finally concluded to submit the question to the king, who decided in favour of the *k* and the *l*. So far as the *l* was concerned, the choice was a matter of indifference; but the use of the *k* has had the rather unfortunate effect of somewhat disguising, in the written language, the close similarity which exists between the Hawaiian and the other idioms of Polynesia. The Rev. Wm. Ellis, the distinguished missionary writer, author of "Polynesian Researches," and other valuable works, visited the Sandwich Islands in 1823. Throughout his narrative the well-known names which are now written Kamehameha and Liholiho, are spelt Tamehameha and Rihoriho. In this orthography they correspond with the forms in the Tahitian language, with which Mr. Ellis was familiar.

To a student of languages, in considering these interchangeable sounds, there are three hypotheses which may occur. It becomes a point of considerable importance, in pursuing an inquiry in regard to the origin of the variation of languages belonging to the same stock, to determine which of these hypotheses is the correct one.

1. We might suppose that every member of a people speaking one of these languages uses these interchangeable sounds indifferently—that a Hidatsa Indian, for example, in uttering the word for mother, says at one time *mia*, at another *wia*, and at another *bia*, as the fancy may strike him, or the euphony of the sentence may seem to require; and so a Hawaiian may say *tanata* or *kanaka*, *Rihoriho* or *Liholiho*, according to his momentary caprice or some casual notion of euphony.

2. Another view might be that some speakers preferred one sound in the series, and others preferred one or other of its variants. One Hidatsa might usually say *mia*, while another more commonly pronounced the word *bia*, and a third was more accustomed to say *wia*; just as in English one speaker may pronounce the vowel in the word "aunt" with the broad sound of *a* in *far*, while another may give it the slender sound of *a* in *fat*; or as one person may omit and another pronounce the aspirate in "humble."

3. A third supposition would be that the difference of sound was not in the speaker's utterance, but in the ear of the listener; that the sound as spoken was an indistinct articulation, intermediate between the sounds represented by the two or more letters of each series, and that the hearer, unaccustomed to sounds of this peculiar character, involuntarily made distinctions where none really existed.¹

Of the three theories thus suggested, the last would, at first

¹ The same subject is treated in Prof. Max Müller's Lectures on the "Science of Language," vol. ii, pp. 183-189.

thought, seem the least likely to be the correct one. Those who have studied the languages in which these uncertain sounds occur have generally adopted one or other—or sometimes both—of the two former suppositions. This, I must admit, was the case with myself, after considerable experience in this line of study. The third view, which supposes the discrimination of the sounds to be due, not to the speaker, but to the listener, had not occurred to me until it was forced upon my attention by the unexpected result of the experiment now to be recorded.

In July, 1872, I had the pleasure of spending a few days at the hospitable home of my friend, Professor Alexander Melville Bell, the distinguished author of "Visible Speech," and other esteemed philological works. Mr. Bell then resided near the city of Brantford, Ontario, at a short distance from the Grand River Reserve, which is occupied by the Canadian remnant of the Iroquois Confederacy. On one occasion we were joined by an intelligent Indian friend, Chief George Johnson, the Warden of the Reserve and Government Interpreter for the six nations. Chief Johnson was a well-educated man, a Mohawk chief of the highest rank, and spoke fluently the dialects of all the Iroquois tribes. The idea occurred to me of taking advantage of this opportunity to clear up, with the aid of the practised ear of Professor Bell, some doubtful points in Iroquois phonology. I proposed that we should take down a list of words in the Canienga (or Mohawk) dialect—Mr. Bell in the nicely discriminating alphabet of his "Visible Speech," and I in the method which I usually adopted in writing these languages. This was accordingly done, and the duplicate list, in Mr. Bell's manuscript and my own, was left with me for study and comparison.

The result was unexpected, and, as it seemed to me, instructive and valuable. In the languages of the Iroquois group, no distinction is made between the *r* and *l*. In the Canienga dialect the pronunciation seems to incline more to the sound of *r*, while in the softer Oneida speech the *l* sound appears to predominate. All the missionaries, Catholic, Anglican, and Methodist, though differing widely in some points of orthography, unite in using the *r* to represent this sound in the Canienga idiom. In the list of words which we wrote down this element occurred twenty-one times. Of these, I found on examination that I had written it ten times with *l*, ten times with *r*, and on one occasion had, in doubt, repeated the word with both orthographies. Mr. Bell had used the *l* nineteen times and the *r* only twice. In two cases in which he had employed the *l* sound he had adopted the character which represents the "non-sonant *l*," a delicate modification of that liquid which he discerns in the pronunciation of the French word *temple* and in the English *felt*.

From this statement it is evident that in eight words where I heard the sound *r*, Mr. Bell at the same moment heard the sound of *l*, either sonant or non-sonant. The conclusion appears inevitable that the sound which we heard was really neither *r* nor *l*, but an utterance midway between the two, and of such a character that to one listener it seemed an *r*, and to the other an *l*. One of the words, as has been stated, I wrote at the time in two forms *ro'niha* and *lu'niha*, meaning "his father." I was unable to decide which orthography most accurately represented the pronunciation I desired to preserve. This word was written by Professor Bell *lu'niha*.

It will be noticed that in writing this word I was uncertain both as to the first consonant and as to the first vowel. What may be called the "round vowel" sound (*o* or *u*, pronounced as in Italian) occurred in our list thirty-one times. I wrote it eighteen times with *o*, twelve times with *u*, and once—in the word just cited—with both *o* and *u*. Mr. Bell, with greater regularity, and probably a nicer ear, employed the *u* throughout. The Catholic missionaries, on the other hand, use only the *o*. The Protestant versions have *o* for the most part, but employ the *u* in a few words.

Many years ago, in taking down some of the languages of Eastern Australia from the lips of the natives, I ascertained the curious fact that their languages made no distinction between *e* and *i*, or between *o* and *u*.¹ They had, in fact, but three vowel sounds, which might be represented either by *a*, *e*, and *o*, or by *a*, *i*, and *u*, at the pleasure of the writer. The Iroquois make a clear distinction between the *e* and the *i*, which are not more frequently confounded in their dialects than in the Indo-European idioms. But between *o* and *u* in Iroquois no distinction exists, and from the evidence of the experiment now detailed it is clear that the sound is not a varying one, inclining at one time to *o* and at another to *u*, but a sound so exactly midway between the two as to perplex an English ear, and to lead two hearers to write the same utterance with different characters.

The Canienga language makes no distinction between the *k* and the *g*, or between the *t* and the *d*. The English missionaries use all these letters; the French missionaries employ only the *k* and *t*. The evidence of our list shows that the latter are most nearly accurate, as it is clear that in the native pronunciation the sound approaches more closely to the vowel than to the sonant utterance. Mr. Bell has written the *k* twenty-four times and the *g* only six times; he has the *t* twenty-six times, and the *d* four times. I wrote, in the same words, *k* throughout, and *t*

¹ All the vowels are to be sounded as in Italian or German.

in every instance but one—the word for “head,” which was written by me *onundzi*, and by Mr. Bell *unundzi*. The same word with *h* prefix (“my head”) was written by Mr. Bell *agenuntzindä*, and by me in two forms, *akenuntsine* and *akenundzine*.

The Iroquois language has a strong guttural aspirate, which the English missionaries express in some words by *h*, in others by *hh*, and in many instances by *gh*. The early Jesuit missionaries, as appears from Bruyas's well-known work (*Radices Verborum Iroqueorum*), had also a threefold notation for this sound, employing sometimes the *h*, sometimes the Greek χ , and sometimes the Greek *spiritus asper* ('). The modern French missionaries, after long and careful study of the language, have decided that all these sounds are but variations, real or apparent, of a single element, which they represent by *h*. The experiment now recorded shows not merely that this view is the correct one, but also that the variations are only apparent, and depend rather on the ear of the listener than on any actual difference of enunciation. In our list I have written the *h* twenty times and the stronger aspirate (here represented by *q*) six times. Mr. Bell in the same words heard only the *h*; but he in three instances employs what he terms in his system the “breath-glide” (which I transcribe by the *spiritus asper* ') when I have used the *h* or the *q*. This occurs only in conjunction with the “non-sonant *l*,” (or *L*), as in *elhal'*, dog, which I have written *elhalth*, and in *kel'hite*, tree, which I wrote *keqlhite*. The aspirate and the liquid in these cases are so combined that it is difficult to say which is first uttered.

The first impulse of many persons on reading of these indeterminate vowels will doubtless be to account for them by the fact that the languages in which they occur are in the uncultivated or barbarous stage. Further consideration, however, will show that this view cannot be maintained. We know from the evidence of the Vedas, the Homeric poems, and the Moallakat, what was the state of the Sanscrit, the Greek, and the Arabic, at a time when the people who spoke these languages were unlettered barbarians. We are aware that the speakers of those tongues discriminated sounds with an accuracy and a variety which their more civilised descendants have failed to preserve. Further, we discover that many barbarous communities of the present day express delicate shades of pronunciation, which we can only with difficulty imitate. In the proper Dakota (or Sioux) language, for example, we learn from the excellent grammar of the Rev. S. R. Riggs, that not only are the surds *k*, *p*, and *t*, distinguished from the sonants *g*, *b*, and *d*, as in English, but that there is another distinction which does not

exist in our language. Each of the surds, as well as the composite sound which corresponds to the English *ch* in “chin,” has a strong explosive or emphatic utterance, which makes of it a distinct element. This difference of sound is indicated in Mr. Riggs’s alphabet by a dot under the emphatic letter. In default of these characters we may employ “small capitals.” The following list will show how accurately these barbarous speakers discriminated in their phonology:—

Sonant.	Surd.	Emphatic.
be, <i>to hatch</i>	pe, <i>sharp</i>	Pe, <i>elm</i>
da, <i>to ask</i>	ku, <i>to come</i>	Ku, <i>to give</i>
	ta, <i>moose</i>	Ta, <i>to die</i>
	cha, <i>when</i>	Cha, <i>to dig</i>

No instance of the sonant *g* is given, as that in the Dakota is merely a dialectical variation. The languages of the Maya, or Central American, family abound in nice distinctions of elementary sounds, which foreigners have a difficulty in acquiring. The Hawaiian, which confounds the *l* with the *r* and the *t* with the *k*, has preserved a peculiarity so apparently slight that the missionaries unfortunately have not deemed it worth indicating; and yet it is, in fact, of the first importance, both in science and in practical use. It is a hiatus, or catching of the breath, which shows where an element formerly in use has disappeared from the language. This element is the Polynesian *k*, which is still retained in the dialects of New Zealand, the Friendly Islands (Tonga), and some other groups, but has disappeared from those of Samoa, Tahiti, and Hawaii. Thus the original Polynesian *ika*, fish, becomes in Hawaiian *i’a*; *aliki* or *ariki*, chief, becomes *ali’i*, *kai*, to eat, becomes *’ai*, and so on. The first missionaries to these islands were intelligent and well-educated men; but, accustomed only to the English pronunciation, they failed to notice this delicate trace of utterance, or did not think it worth indicating. They themselves never acquired it, though their children, born and reared in the islands, use it habitually, like their aboriginal companions. In the native pronunciation, the words *ao*, daylight, *a’o* (for the Polynesian *ako*), to teach, and *’ao* (for the Polynesian *kao*), to sprout, are plainly distinguished; but in the ordinary orthography of the language, all these words are confounded in one spelling *ao*. It is precisely as though the English language were to be written for the first time by persons who could not distinguish the aspirate. No difference would be made in their orthography between *heat* and *eat*, *hair* and *air*; and in reading

of the "edge" of a field, we should not know, from the spelling, whether the writer referred to its border or its hedge.

The same peculiarity is found in the Iroquois dialects, and has been equally neglected by the missionaries, except in one instance. The Rev. Asher Wright, the late accomplished missionary among the Senecas, who had a turn for philology, and especially for distinguishing sounds, has employed a peculiar character, a modification of the *h* (which we may represent by *h*) to indicate this hiatus. He remarks of it:—"This letter never precedes a vowel. Following one, it should be spoken by giving the vowel an explosive force, and breaking it off suddenly, in such a manner as for the instant to stop the breath entirely, as we often hear white people in hastily pronouncing the interjection Oh!—especially when they repeat it several times in rapid succession, in indicating to a child that it is doing something wrong. This sound is very abundant in Seneca, and, used in conjunction with certain other modifications, the mode and time of verbs, and various other circumstances, are denoted by it. Often, also, it forms the chief distinction between words of very dissimilar meaning. No one can read or write Seneca intelligibly who does not pay the strictest attention to this character and avoid confounding it with the rough aspirate of the common *h*."

Thus, among the examples, we find that *hahnih*, "my father" (speaking of him), has for its vocative form *hahnih*, "my father" (speaking to him). *Wa-a^h*, "he said," differs only by the absence of this element in the first syllable from *wah-a^h*, "she thought." In the Tuscarora an example given to me by an intelligent school-teacher of that nation was *ohsōhkwa*, "finger," which differs only in this element from *ohsōhkwa*, "lip." In the Canienga or Mohawk dialect, this hiatus was noted by both Mr. Bell and myself, though, as was natural in writing a strange language, we did not always remark it, and in some instances it was noticed by one and omitted by the other. I have usually represented it by an apostrophe, as in *iksha'a*, "child," *lu'niha*, "his father." Whether the hiatus indicates in the Iroquois, as in the Hawaiian, the loss of an element, or is a mere trick of utterance, is a question not yet determined.

Many languages which have been reduced to writing of late years, in America, Oceania, and Africa, have undoubtedly suffered a serious impoverishment in their phonology from the fact that the persons by whom they were first written were foreigners accustomed only to the European mode of utterance. If the Sanscrit had been first written by an Englishman, a Frenchman, or a German, it is very doubtful if the distinction between the lingual and dental elements would have been preserved. The Arabic, under the like circumstances, would

probably have suffered a serious deterioration in its dentals and its gutturals. The fortunate circumstance that Mr. Riggs was an accomplished philologist has preserved in the Dakota language distinctions that would probably otherwise have been lost. But for this "lucky accident," the readers of that language would have had no evidence of the difference of pronunciation which exists between *ku*, to come, and *ku*, to give. *Da*, to ask, *ta*, a moose, and *ta*, to die, might have been confounded in the Dakota, as *ao*, daylight, *'ao*, to teach, and *a'o*, to sprout, are now confounded in the Hawaiian. No one, probably, but a scholar familiar with the Semitic tongues would have distinguished and represented in the Dakota, the form of *G* which expresses "a deep sonant guttural resembling the Arabic ghain (غ) and the form of *H* which represents a strong surd guttural resembling the Arabic kha (خ)."

There are still many unwritten languages in Western Oceania and in Central Africa, for which alphabets will have to be provided. It will be fortunate if the persons to whom this important duty is entrusted shall be scholars trained in the scientific study of language. If this advantage cannot be secured, care may at least be taken that the work of settling the alphabet shall not in any case be entrusted to one person, however intelligent and well-instructed. The result of the experiment now recorded will show how essential it is that, to determine the real distinctions in the elementary sounds of a language, its words should be taken down by two or more persons, listening and writing simultaneously. In this way alone it will be possible to avoid, on the one hand, the danger of confounding sounds which should be kept distinct, and, on the other, that of finding distinctions where none really exist.

As regards the special results of this experiment, it will not be safe to infer that in all cases where such uncertainty prevails as is found to exist in the Iroquois and the Polynesian dialects in discriminating between sounds which to us seem widely different, this uncertainty is due to a lack of clear perception in the listener. It is highly probable that in some cases the pronunciation of the different natives, or of the same native at different times, actually varies. But the experience now set forth will at least serve to prove that this is not always, or perhaps usually, the case. We must recognise the fact, which has heretofore been overlooked, that in certain languages—and possibly in all languages—there are elementary sounds which affect so differently the ears of two listeners accustomed to a foreign speech, that in noting them they will be likely to use different characters to represent the same utterance. In other words, there are elements, in some if not in all languages, which

hold a middle place between two corresponding elements of some other language. And the sounds which these medial elements thus represent may even be as widely diverse as, according to our notions, the *r* is from the *l*, and the *t* from the *k*.

In our own language a singular instance of this peculiarity has been noted and well described in an article on Shakespeare by the distinguished philologist and Shakespearean commentator, Mr. Richard Grant White, which appeared in the *Atlantic Monthly* for June, 1884. Mr. White brings to notice the curious fact that in Shakespeare's time, and earlier, there were many English words in which the dental sound was written indiscriminately either with *t* and *th*, or with *d* and *dh*. He gives numerous examples, such as *stalwart* and *stalworth*, *fifth* and *fiſt*, *better* and *bether*, *hundred*, *hundret*, and *hundreth*, *swarthy* and *swarty*, *murder* and *murther*, *burden* and *burthen*; and he continues—speaking of his own edition of Shakespeare's works:—"It will be observed that in the Riverside Shakespeare, *murder* has both its modern spelling and the form *murther*. The variation is that of the old copies, which was purposely retained. The pronunciation was not *murther*, with the *theta* sound, which is poorly indicated by *th*, nor exactly that of *d*, but just that, I am sure, which has survived in the north of Ireland (carried there by English invaders, and chiefly by Cromwell's troopers), and which we have all heard, *murdher*." This acute suggestion of Mr. White gives us a case which is exactly in point. Every one who has heard the Irish pronunciation of the word in question is aware that it is such as one hearer might represent by *murder*, while another would prefer to spell it *murther*. In other words, it is an intermediate sound between the *d* and the *th*, exactly analogous to the intermediate elements which are found in the Iroquois and other languages.

The manner in which differences of dialect, and finally of language, might grow out of this peculiarity of pronunciation is evident. If an emigrating horde, whose speech possessed these indeterminate elements, were to conquer and absorb a tribe accustomed to a more precise mode of utterance, these indistinct articulations would, in the mingled race, tend to assume a fixed and positive character in one direction. A like result, though in a different direction of change, might happen in a second or a third migration, encountering and overcoming other tribes. Thus the Hidatsa people might send out three conquering colonies, in one of which the word for "mother" might come to be always pronounced *bia*, in the second *mia*, and in the third *wia*. If the original Aryan speech possessed intermediate articulations

of the kind now described, it is easy to understand how in the progress of the conquering migrations of Aryan hordes which absorbed the original populations of Northern India and of Europe, the varieties of pronunciation signalled in "Grimm's law," as well as many other changes, consonantal and vocalic, *al* would gradually arise. These changes, with the accompanying alterations in grammar, and the inevitable acquisitions of new words from the idioms of the conquered tribes, would finally produce the various Indo-European languages.

The following is the list of words taken down by Mr. Bell and myself. It must be borne in mind that the words were written hastily, with only one hearing, and with no opportunity of revision. Under such circumstances some mistakes are inevitable, and must be allowed for. In the orthography here adopted, the consonants have in general their English sounds, and the vowels their Italian or German sounds. The *ç* is sounded like the *sh* in "shine," and *tç* represents the sound of *ch* in "chest." The *q* represents the German *ch* (Greek *χ*). The *à* is the *Urvocal*, or the short English *u* in "but." The French nasal *n* is indicated by a small ⁿ above the line, and the English nasal (*ng* in "song") by *ñ*. The apostrophe (') marks the hiatus, or sudden catching of the breath, already referred to.

I have added the corresponding words in the forms severally adopted by the Anglican and the Roman Catholic missionaries, the former written for me by an educated Mohawk, and the latter derived from the Iroquois Lexicon of the Rev. J. A. Cuoq. For the purpose of comparison all the words are transliterated from the differing missionary orthographies into the alphabet employed in my own list. A study of these various forms, taken in conjunction with the facts of our experiment, will probably be found sufficient to establish the existence of several of those intermediate articulations whose part and influence in the phonology of language have been generally overlooked.

CANIENGA (OR MOHAWK) VOCABULARY IN FOUR RENDERINGS.

		Bell.		Hale.		English Mission.		R.C. Mission.
one ..	..	à ⁿ skāh	..	à ⁿ ska ..	..	à ⁿ skaht, or à ⁿ ska	..	à ⁿ skat, à ⁿ sha.
two ..	..	tēkñih	..	tēkenih	..	tekeni	..	tekeni.
three ..	..	āqsà ⁿ ..	..	ahsà ⁿ ..	..	ahsà ⁿ ..	..	aksa ⁿ .
four ..	..	kāyēlīh	..	kayēlīh	..	kayerih	..	kaieri.
five ..	..	wisk ..	..	wisk ..	..	wisk ..	..	wisk.
six ..	..	yāya'k'	..	yāyak ..	..	yayak ..	..	iaiak.
seven	..	tyātāh	..	tçatā' ..	..	jadahk	..	tsiatak.
eight	..	sātēkū ⁿ	..	sa'tēku ⁿ	..	çadeko ⁿ	..	sateko ⁿ .

CANIENGA (OR MOHAWK) VOCABULARY IN FOUR RENDERINGS—continued.

	Bell.	Hale.	English Mission.	R.C. Mission.
nine ..	tyühtà ..	tiöhto ..	tyohdo ^h ..	tiohto ^a .
ten ..	uyëli ..	oyëli ..	oyerie. ..	oieri.
eleven ..	a ^s ka ^a ewà ^{li} ..	a ^s ka yawà ^{li} ..	a ^s kaht yawà ^{re} ..	à ^s skat iawà ^{re} .
twelve ..	tegeniawà ^{li} ..	tékeni yawà ^{li} ..	tekeni yawà ^{re} ..	tekeni iawà ^{ra} .
twenty ..	tewàhshà ⁿ ..	tewàqsà ⁿ ..	tewahshà ⁿ ..	tewasà ⁿ .
thirty ..	ahsànewàhsà ⁿ ..	aqsàniwàqsà ⁿ ..	ahsà ⁿ niwahshà ⁿ ..	ahsa ⁿ niwasà ⁿ .
forty ..	kayëliniwàhsà ⁿ ..	kayëliniwàqsà ⁿ ..	kayerih niwahshà ⁿ ..	kaieri niwasà ⁿ .
fifty ..	wiskniwàhsà ⁿ ..	wisk niwàqsà ⁿ ..	wisk niwahshà ⁿ ..	wisk niwasà ⁿ .
one hundred	à ^s kahtewà ⁿ - 'niàwi ..	à ^s ka tewà ⁿ - 'niàwe ..	a ^s kaht dewà ⁿ - niawe ..	e ^s kat tewà ⁿ - niawe.
two hundred	tëkinidewà ⁿ - 'niàwi ..	tékeni tewà ⁿ - 'niàwe ..	tekeni dewà ⁿ - niawe ..	tekeni tewà ⁿ - niawe.
three hundred	ahsà ⁿ dewà ⁿ - 'niàwi ..	ahsà ⁿ tewà ⁿ - 'niàwe ..	ahsà ⁿ dewa ⁿ - niawe ..	ahsà ⁿ tewà ⁿ - niawe.
one thousand	uyëlitewà ⁿ - 'niàwi ..	oyëli tewà ⁿ - 'niàwe ..	oyeri dewa ⁿ - niawi ..	oieri tewà ⁿ - niawe.
my father ..	rakè ⁿ iha ..	rakè ⁿ iha ..	rakeniha ..	rakeniha.
thy father ..	ya ⁿ iha ..	ya ⁿ iha ..	yaniha ..	hianiha.
his father ..	lu ⁿ iha ..	ro ⁿ iha, lu ⁿ iha ..	roniha ..	roniha.
my mother ..	istà ⁿ 'a ..	istà ⁿ 'a ..	isdà ⁿ 'ah ..	istà ⁿ 'ha.
thy mother ..	sa ⁿ istà ⁿ 'ha ..	sànistà ⁿ 'ha ..	sanisdà ⁿ 'ha ..	sanistà ⁿ 'ha.
his mother ..	lu ⁿ istà ⁿ 'ha ..	ro ⁿ istà ⁿ 'ha ..	ronistà ⁿ 'ha ..	ronistà ⁿ 'ha.
my head ..	agëñ ^u 'tzinà ..	àkenu ^{ts} ine or akeno ^d zine	akeno ^d jih or akeno ^d jineh	akeno ^{ts} i.
thy head ..	zanüntsìnà ..	sānu ^{ts} ine ..	sano ^d jih ..	sano ^{ts} i.
his head ..	lañüntsìnà ..	raonu ^{ts} ine ..	raono ^d jih ..	raono ^{ts} i.
my hair ..	agenü ⁿ 'kwis ..	akenü ⁿ 'kwis ..	akeno ⁿ 'kwis ..	akeno ⁿ 'kwis.
hair ..	ñnū ⁿ 'kwis ..	onū ⁿ 'kwis ..	ono ⁿ 'kwis ..	ono ⁿ 'kwis.
head ..	ñnūndzih ..	onū ⁿ 'dzi ..	ono ⁿ 'djh ..	ono ⁿ 'tsi.
eye ..	ükālā' ..	okara ..	okara ..	okahra.
nose ..	u ⁿ 'nyū ⁿ 'sa ..	o ⁿ 'nīū ⁿ 'sa ..	onyo ⁿ 'sa ..	onio ⁿ 'sa.
teeth ..	unāwi' ..	onāwi ..	onawi ..	onawira.
ear ..	uhū ⁿ 'ta ..	ohū ⁿ 'ta ..	oho ⁿ 'da ..	oho ⁿ 'ta.
hand ..	usnū ⁿ 'sa ..	osnū ⁿ 'sa ..	osno ⁿ 'sa ..	osno ⁿ 'sa.
tree ..	kēL'hīte ..	kēqlhite ..	kerhide ..	kerhite.
dog ..	ēlhal' ..	ēlhalh ..	erhar ..	erhar.
house ..	kanū ⁿ 'sa ..	kanū ⁿ 'sa ..	kano ⁿ 'sa ..	kano ⁿ 'sa.
town ..	kanāta ..	kanāta ..	kanada ..	kanata.
large town ..	kanatuwānà ⁿ ..	kanatowānà ⁿ ..	kanadowanà ⁿ ..	kanatowanà ⁿ .
man ..	lu ⁿ 'gwe ..	rūñkwe ..	ro ⁿ 'gwe ..	ro ⁿ 'kwe.
woman ..	ikshā'a ..	ikshā'a ..	exhaah ..	eksaa.
husband ..	lune ..	lone ..	rone ..	rone.
wife ..	tiagenitelu ⁿ ..	tiakenitelu ⁿ ..	teyagenidero ⁿ ..	teiakenitero ⁿ .
white ..	kā ⁿ 'lākā ⁿ ..	kā ⁿ 'rākā ⁿ ..	kā ⁿ 'rakā ⁿ ..	kārakā ⁿ .
black ..	kahū ⁿ 'dzi ..	kahū ⁿ 'tçi ..	kaho ⁿ 'jih ..	kaho ⁿ 'tsi.
yellow ..	utsinakwāL' ..	otsinekwāhr ..	odjinekwar ..	otsinekwar.
red ..	unēkwā ⁿ 'karā ..	onekwā ⁿ 'tārā ..	onekwā ⁿ 'dara ..	onekwā ⁿ 'tara.
green ..	uhu ⁿ 'te ..	ohūnte ..	oho ⁿ 'de ..	oho ⁿ 'te.

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